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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/565,815

Applicant(s)DE POORTERE, GERRIT
FREDERIK MAGDALENA**Examiner**

GEORGE C. MONIKANG

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 & 5-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/565,815.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/17/2009 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-2 & 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over watanabe et al, US Patent 5434926, in view of Hermann, US Patent 6360187 B1. (Watanabe et al is cited in IDS filed 8/15/2007)

Re Claim 1, Watanabe et al discloses an audio conditioning apparatus for conditioning an audio signal to be output (*abstract*), said audio conditioning apparatus comprising: an input for receiving the audio signal (*fig. 2: 11*); a noise characterizing unit determining a noise level of environmental noise (*fig. 2: 12b; col. 3, lines 47-53: noises in mid-range frequency band are detected*); a volume amplification unit to said input for amplifying a volume of the audio signal, by a volume gain in dependence on the noise level (*fig. 2: 14b; col. 3, line 61 through col. 4, line 6: senses the noise of the midrange frequency band and compensates for with an appropriate gain obtained from figure 2: 13*), a further noise characterizing unit determining a further noise level of the environmental noise in a bass frequency noise band or a treble frequency noise band (*fig. 2: 12a & 12c; col. 3, lines 42-46 & lines 54-59: senses the noises of each the low frequency band and high frequency band and compensates for them by increasing the amplitude based on gain from the volume correction of figure 2: 13*) and a further amplification unit amplify coupled to said volume amplification, unit for amplifying by a further gain the amplitude of frequency components in a bass frequency audio band and a treble frequency audio band of the audio signaling dependence of the further noise level the base or treble frequency band (*fig. 2: 14c; ; col. 3, line 61 through col. 4, line 6: amplifier 14c adjusts the gain with the effect of volume correction of figure 2: 13*), wherein said noise characterizing unit determines said noise level of environmental

noise based in a mid frequency noise band of said environmental noise, said mid frequency noise band being complementary to said base frequency noise band and said treble frequency noise band (*col. 1, lines 50-57: since the midrange frequency causes most noise to a user, the Watanabe invention seeks to solve this issue by especially compensating for the gain of the midrange frequency. Thus, the more the midrange noise is greater than the high range noise, the volume compensation gain is larger; col. 6, lines 3-8*), but fails to disclose a gain dispatcher unit coupled to said input for allocating a maximum allowable gain of the volume amplification unit and the further amplification unit on the basis of available headroom for amplification. However, discloses allocating a maximum allowable gain (available headroom) and a programmable gain that has to be within the limit of the maximum allowable gain (*Hermann, fig. 7: 48-49; col. 4, lines 8-33*). It would have been obvious to use the gain allocating capabilities of Hermann (*Hermann, fig. 7: 48-49; col. 4, lines 8-33*) to allocate maximal gain limits for the audio conditioning apparatus of Watanabe et al for the purpose of producing sound levels that could compensate for ambient noise.

Re Claim 2, the combined teachings of Watanabe et al and Hermann disclose an audio conditioning apparatus as claimed in claim 1, wherein an upper limit of the bass frequency audio band substantially lies in the range of 60 to 150 Hz, and wherein a lower limit of the treble frequency audio band substantially lies in the range of 8 kHz to 12 kHz (*Watanabe et al, col. 1, lines 50-57: as seen in col. 1, lines 50-57, these are common ranges of bass and treble frequencies*).

Re Claim 8, the combined teachings of Watanabe et al and Hermann disclose an audio reproduction apparatus, comprising: a loudspeaker for reproduction of the audio signal (Watanabe et al, fig. 2: 14d); an access to an input audio signal on which the audio signal is based (Watanabe et al, abstract); and the audio conditioning apparatus (Watanabe et al, abstract) as claimed in claim 1.

Claims 9 & 10 have been analyzed and rejected according to claim 1.

1. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over watanabe et al, US Patent 5434926 and Hermann, US Patent 6360187 B1 as applied to claim 1 above, and further in view of Kuusama, US Patent 5509081. (Kuusama is cited in IDS filed 8/15/2007)

Re Claim 3, the combined teaching of Watanabe et al and Hermann disclose an audio conditioning apparatus as claimed in claim 1, but fail to disclose wherein said audio conditioning apparatus further comprises: a gain consistency unit is coupled to said noise characterizing unit and said further noise characterization unit for yielding a gain consistently varying in time, according to a predetermined mathematical criterion as taught in Kuusama (Kuusama, col. 3, lines 17-38). It would have been obvious to use the gain consistency unit of Kuusama (Kuusama, col. 3, lines 17-38) with the audio conditioning apparatus of Watanabe et al and Hermann for the purpose of providing different time constants for the gain.

2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over watanabe et al, US Patent 5434926 and Hermann, US Patent 6,360,187 B1 as applied to claim 1 above, and further in view of Bohn, US Patent 5046105. (Bohn is cited in IDS filed 8/15/2007)

Re Claim 5, the combined teaching of Watanabe et al and Hermann disclose an audio conditioning apparatus as claimed in claim 1, but fail to disclose wherein the further amplification unit comprises a shelving filter as taught in Bohn (Bohn, col. 8, lines 56-60). It would have been obvious to use the amplification unit comprising a shelving filter of Bohn (Bohn, col. 8, lines 56-60) with the audio conditioning apparatus of Watanabe et al and Hermann for the purpose of causing the amplitude versus frequency response characteristics of the audio signal to exhibit the shape of a shelf.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over watanabe et al, US Patent 5434926 and Hermann, US Patent 6360187 B1 as applied to claim 1 above, and further in view of Takahashi et al, US Patent 6891954 B2.

Re Claim 6, Watanabe et al discloses an audio conditioning apparatus as claimed in claim 1, wherein said audio conditioning apparatus is connectable to a loudspeaker usable for reproduction of the audio signal (Watanabe et al, fig. 2: 14d), an environmental noise being measurable by a microphone (Watanabe et al, fig. 2: 11; col. 3, lines 29-32); but fail to disclose wherein said audio conditioning apparatus further comprises an active noise canceling unit for substantially canceling environmental noise in a cancellation band of frequencies as taught in Takahashi et al (Takahashi et al,

abstract). It would have been obvious to use the noise canceling unit of Takahashi et al (Takahashi et al, abstract) with the audio conditioning apparatus of Watanabe et al and Hermann for the purpose of canceling the surrounding noise.

Watanabe et al, Hermann and Takahashi et al fail to disclose the loudspeaker being a headphone. Official notice is taken that both the concepts and advantages of providing headphone loudspeakers are well known in the art. It would have been obvious to use headphones since they are commonly used as portable speakers.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over watanabe et al, US Patent 5434926, Hermann, US Patent 6360187 B1 and Takahashi et al, US Patent 6891954 B2 as applied to claim 6 above, and further in view of Philipsson et al, US Patent 7006624 B1.

Re Claim 7, Watanabe et al, Hermann and Takahashi et al disclose an audio conditioning apparatus as claimed in claim 6, but fail to disclose wherein said audio conditioning apparatus further comprises a distance measuring device for measuring a distance between the microphone and the loudspeaker as taught in Philipsson et al (Philipsson et al, col. 4, lines 32-41). It would have been obvious to use the distance measuring device of Philipsson et al (Philipsson et al, col. 4, lines 32-41) with the audio conditioning apparatus of Watanabe et al, Hermann and Takahashi et al for the purpose of controlling the gain.

Watanabe et al, Hermann, Takahashi et al and Philipsson et al fail to disclose the loudspeaker being a headphone. Official notice is taken that both the concepts and

advantages of providing headphone loudspeakers are well known in the art. It would have been obvious to use headphones since they are commonly used as portable

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GEORGE C. MONIKANG whose telephone number is (571)270-1190. The examiner can normally be reached on M-F, alt Fri. Off 7:30am-5:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/565,815
Art Unit: 2614

Page 9

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